

### AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated:

**1-12. (Canceled)**

13. **(Currently Amended)** A method of screening for an autoimmune disease ~~rheumatoid arthritis~~ in a mammal comprising:

contacting a sample from said mammal to an immobilized polypeptide or fragment thereof homologous to at least a portion of at least one protein selected from the group consisting of L35 protein, eukaryotic translation elongation factor 1  $\alpha$ -2; NADH dehydrogenase 3 (complex I), 24-kDa subunit of complex I, mitotic kinesin-like protein-1, thromboxane synthase, and uncoupling protein homolog; and

detecting binding of an antibody from said sample to said immobilized polypeptide or fragment thereof.

14. **(Original)** The method of claim 13, wherein the polypeptide or fragment thereof is immobilized on a microarray.

15. **(Original)** The method of claim 13, wherein the proteins are His-tagged.

16. **(Original)** The method of claim 13, wherein the proteins are printed on a charged nickel slide.

**17-20. (Canceled)**

21. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of L35 protein.

22. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of eukaryotic translation elongation factor 1  $\alpha$ -2.

23. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of NADH dehydrogenase 3.

24. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of 24-kDa subunit of complex I.

25. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of mitotic kinesin-like protein-1.

26. **(New)** The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of thromboxane synthase.

27. (New) The method of Claim 13, wherein the polypeptide or fragment thereof is homologous to at least a portion of uncoupling protein homolog.

28. (New) The method of Claim 13, wherein the autoimmune disease is rheumatoid arthritis.

29. (New) The method of claim 28, wherein the polypeptide or fragment thereof is immobilized on a microarray.

30. (New) The method of claim 28, wherein the proteins are His-tagged.

31. (New) The method of claim 28, wherein the proteins are printed on a charged nickel slide.

32. (New) The method of Claim 28, wherein the polypeptide or fragment thereof is homologous to at least a portion of L35 protein.

33. (New) The method of Claim 28, wherein the polypeptide or fragment thereof is homologous to at least a portion of eukaryotic translation elongation factor 1  $\alpha$ -2.

34. (New) The method of Claim 28, wherein the polypeptide or fragment thereof is homologous to at least a portion of NADH dehydrogenase 3.

35. (New) The method of Claim 28, wherein the polypeptide or fragment thereof is homologous to at least a portion of 24-kDa subunit of complex I.

36. (New) The method of Claim 28, wherein the polypeptide or fragment thereof is homologous to at least a portion of mitotic kinesin-like protein-1.